(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date23 September 2004 (23.09.2004)

PCT

(10) International Publication Number WO 2004/082282 A1

(51) International Patent Classification⁷: 7/20, 1/00, 7/24

H04N 7/10,

(21) International Application Number:

PCT/US2004/007270

(22) International Filing Date: 9 March 2004 (09.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/453,763

11 March 2003 (11.03.2003) US

60/453,491

11 March 2003 (11.03.2003) US

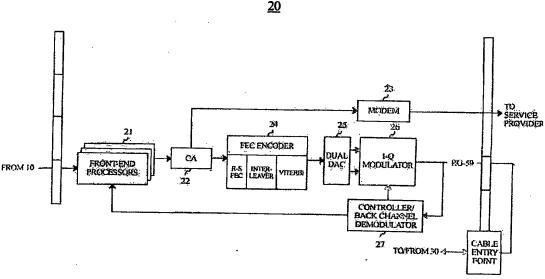
- (71) Applicant (for all designated States except US): THOM-SON LICENSING S.A. [FR/FR]; 46 Quai A. LeGallo, F-92648 Boulogne (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PUGEL, Michael,

Anthony [US/US]; 20925 Creek Road, Noblesville, Indiana 46060 (US). LANKFORD, Douglas, Edward [US/US]; 5256 Cheyenne Moon, Carmel, Indiana 46033 (US). CURTIS, John, Joseph [US/US]; 121 Scarborough Circle, Noblesville, Indiana 46060 (US). WEHMEYER, Keith, Reynolds [US/US]; 6411 Columbia Circle, Fishers, Indiana 46038 (US). DERRENBERGER, Mike, Arthur [US/US]; 11721 River Ridge Drive, Fishers, Indiana 46038 (US). LOCKRIDGE, Terry, Wayne [US/US]; 5478 Grantland Drive, Dayton, Ohio 45429 (US). BOWYER, Andrew, Eric [US/US]; 8767 Shebyville Road, Indianapolis, Indiana 46259 (US).

- (74) Agents: TRIPOLI, Joseph, S. et al.; Two Independence Way, Suite #200, Princeton, New Jersey 08540 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR DISTRIBUTING SIGNALS BY DOWN-CONVERTING TO VACANT CHANNELS



(57) Abstract: A gateway apparatus (20) is capable of distributing signals such as audio, video, and/or data signals in a household and/or business dwelling using the existing coaxial cable infrastructure, and the signal distribution is controlled using the coaxial cable infrastructure as a back channel. According to an exemplary embodiment, the gateway apparatus (20) includes signal processing elements (21, 24, 25, 26) for receiving signals from a broadcast source and processing the received signals to generate processed analog signals. A back channel demodulator (27) receives a request signal from a client device (30) via a coaxial cable connecting the gateway apparatus (20) and the client device (30). The processed analog signals are provided to the client device (30) via the

- TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.